UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/538,503	06/09/2005	Bruno Le Briere	2005_0920A	7029

513 7590 04/03/2008

WENDEROTH, LIND & PONACK, L.L.P.
2033 K STREET N. W.
SUITE 800
WASHINGTON, DC 20006-1021

EXAMINER	
DANG, HUNG Q	
ART UNIT	PAPER NUMBER
2612	

MAIL DATE	DELIVERY MODE
04/03/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/538,503	LE BRIERE ET AL.	
	Examiner	Art Unit	
	HUNG Q. DANG	2612	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 June 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7 and 10-16* is/are rejected.

7)☒ Claim(s) *8-9* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *09 June 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This communication is in response to application's preliminary amendment dated 6/9/2005.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-7 and 10-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Soulier U.S. Patent 5,394,141.

Regarding claims 1,4, 5 and 7, Soulier teaches a device for transmitting data in an installation for working fluids contained under ground, the installation comprising a cavity (borehole; see figure 4) defined in an underground formation and extending from the surface of the ground, said cavity (borehole) being provided with at least one electrically conductive tubular element (casing; figure 2, unit 13), the device being of the type comprising a single-strand smooth cable (figure 4, unit 24 or figure 6, unit 17) for supporting an action and/or measurement assembly, being made of an electrically conducive material and being disposed in the tubular element between a first point at the surface of the ground and a second point within the cavity, wherein the device being characterized in that the surface of the cable is electrically insulated, at least in part,

from said tubular element (column 6, lines 1-5), and wherein the device further comprises transmitter means (figure 7, unit 9) for transmitting an electrical and/or electromagnetic signal, situated in the vicinity of one or both of the first and second points, and receiver means (figure 4, unit 14) for receiving an electrical and/or electromagnetic signal situated in the vicinity of the other one or both of the first and second points; each of said transmitter means and said receiver means being electrically connected firstly to the cable and secondly to the tubular element and/or to the formation (see figure 7, receiver means 9 is connected to the formation); the cable constituting a portion of a loop for conveying the electrical and/or electromagnetic signal between the transmitter means and the receiver means (see figure 7 and column 6 lines 45-68).

Even though, Soulier does not specifically teach that the cable having a breaking strength greater than 300 daN, however, one of ordinary skill in the art would recognize that such breaking strength can be easily derived by one skilled practitioner, depending on the length of the cable and the total weight being suspended on the cable, to obtain an optimal breaking strength of the cable that can endure desired weight. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide such breaking strength to the cable disclosed by Soulier, for the reasons explained above.

Regarding claim 2, the Examiner gives Official Notice that electrical cables in downhole environment have been commonly insulated from the casing, so that short-circuit can be prevented. Therefore, it would have been obvious to one of ordinary skill

in the art at the time the invention was made to provide a continuous coating of insulating material to the cable disclosed by Soulier, as explained above.

Regarding claim 3, one of ordinary skill in the art would recognize that the thicker the insulation coating is, the heavier the cable would be and the less signals interference would be. Therefore, it would have been obvious to one of ordinary skill in the art to provide such claimed thickness of insulation to the cable disclosed by Soulier to achieve desired cable weight.

Regarding claim 6, the cavity (borehole) disclosed by Soulier is also provided with at least a first tubular element (figure 7, unit 37) and a second tubular element (figure 7, unit 36) disposed inside the first element, and wherein the cable is disposed in the annular space between the first and second elements.

Regarding claim 10, the transmission device disclosed by Soulier is also characterized in that the electrical contact between the formation and the transmitter and/or receiver means in the vicinity of the first point takes place via a conductor member anchored in the ground (see figure 7).

Claims 11-13 are rejected for similar reasons stated in the rejection of claim 1.

Regarding claims 14-16, the Examiner gives Official Notice there has to be some sort of an applicator used for applying insulating coats on cables. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide an insulation applicator to the system disclosed by Soulier so that said cable can be insulated.

Allowable Subject Matter

4. Claims 8-9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claim 8, the prior arts of record fail to teach the transmission device according to claim 7, wherein characterized in that the electrical signal transmitted by the transmitter means in the vicinity of the first point is injected to a first dipole comprising firstly an electrical contact point between the cable and the transmitter means in the vicinity of the first point, and secondly an electrical contact point between the formation and the transmitter means in the vicinity of the first point; the first dipole generating an electromagnetic signal that is received by a second dipole comprising firstly one of said electrical contact points between the cable and the tubular element, and secondly an electrical contact point between the tubular element and the receiver means in the vicinity of the second point, with the electromagnetic signal received by the second dipole generating an electrical signal which is conveyed to the receiver means in the vicinity of the second point.

Regarding claim 9, the prior arts of record fail to teach the transmission device according to claim 7, wherein characterized in that the electrical signal transmitted by the transmitter means in the vicinity of the second point is injected into a second dipole comprising firstly one of said electrical contact points between the cable and the tubular element, and secondly an electrical contact point between the tubular element and the transmitter means in the vicinity of the second point, said second dipole generating an

electromagnetic signal received by a first dipole comprising, firstly an electrical contact point between the cable and the receiver means in the vicinity of the first point, and secondly an electrical contact point between the formation and the receiver means in the vicinity of the first point; the electromagnetic signal received by the first dipole generating an electrical signal that is conveyed to the receiver means in the vicinity of the first point.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to HUNG Q. DANG whose telephone number is (571)272-3069. The examiner can normally be reached on 9:30AM-6PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Zimmerman can be reached on (571) 272-3059. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Hung Q Dang/
Examiner, Art Unit 2612

/Albert K Wong/
Primary Examiner, Art Unit 2612